REMARKS

Entry of the foregoing amendments is respectfully requested.

Summary of Amendments

Upon entry of the foregoing amendments, claims 27-57 are cancelled and claims 58-88 are added, whereby claims 58-88 will be pending, with claims 58 and 86 being independent claims.

Support for the new claims can be found throughout the present specification (see, e.g., pages 5-7) and in the cancelled claims.

Applicants emphasize that the cancellation of claims 27-57 is without prejudice or disclaimer, and Applicants expressly reserve the right to prosecute the cancelled claims in one or more continuation and/or divisional applications.

Summary of Office Action

As an initial matter, Applicants note with appreciation that the Office Action indicates that the claim for priority is acknowledged and that a certified copy of the priority document has been received by the Patent and Trademark Office from the International Bureau.

Applicants also note with appreciation that the Examiner has indicated consideration of the Information Disclosure Statement filed April 4, 2007.

The restriction requirement is made final and claims 38-57 are withdrawn from consideration.

Claims 27-32 are objected to.

Claims 27-37 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for

allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claims 27-37 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over (presumably) Livage et al., "Sol-Gel Chemistry of Transition Metal Oxides", Prog. Solid. St. Chem., Vol. 18, 1988, pp. 259-341 (hereafter "LIVAGE") in view of Nass et al., U.S. Patent 5,593,781 (hereafter "NASS").

Response to Office Action

Reconsideration and withdrawal of the objection and rejections of record are respectfully requested, in view of the foregoing amendments and the following remarks.

Response to Objection to Claims

Claims 27-32 are objected to because of the misspelling of "hydrolyzable".

Applicants submit that in the claims submitted herewith "hydrolyzable" is spelled correctly, thereby rendering this objection moot.

Response to Rejection under 35 U.S.C. § 112, Second Paragraph

Claims 27-37, i.e., all claims under consideration, are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. The rejection alleges that the phrase "the resultant" in independent claim 27 lacks proper antecedent basis.

Applicants note that claim 27 is cancelled and the claims submitted herewith do not recite the phrase "the resultant", wherefore this rejection is moot.

Response to Rejections under 35 U.S.C. § 103(a)

Claims 27-37 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over (presumably) LIVAGE in view of NASS. The rejection merely states:

> Livage teaches the instantly claimed process of hydrolysis and condensation of a hydrolysable lipophilic group containing compound in water but may differ in that the removal of liquid to form a powder is not stated. See pp. 259,286-289, Fig. 16.
>
> Nass teaches a similar process as Livage and teaches the removal of liquid in order to obtain a ceramic powder. See claim 1.
>
> It would have been obvious to one skilled in the art to remove liquid form the product of Livage as taught by Nass in order to obtain the more valuable nanoscale ceramic powder.

Applicants note that the rejected claims are cancelled, wherefore this rejection is moot. Applicants further note that the present rejection is very unspecific in that it does not indicate at all where the elements which are recited in claims 27-37 are allegedly disclosed at pages 259 and 286-289 of LIVAGE in the Examiner's opinion, and neither is this apparent for most of these elements. For example, it is not seen that LIVAGE discloses the elements of dependent claims 31-37 (see, e.g., claims 62, 81-85 and 87 submitted herewith), and neither does the Examiner provide any explanation in this regard. The rejection also fails to explain the alleged relevance of Fig. 16 of LIVAGE.

In view of the foregoing facts, Applicants are unable to specifically address the present rejection. Accordingly, should the Examiner not feel in a position to allow the claims submitted herewith, it is respectfully requested that another non-final Office Action which explains why and

where LIVAGE is considered to disclose the elements recited in the rejected claims be issued to provide Applicants with a fair and complete opportunity to address the Examiner's concerns.

Based on their limited understanding of the reasons why the Examiner may consider LIVAGE (and NASS) relevant, Applicants further offer the following comments:

It is noted that instant independent claim 58, for example, is drawn to a process for producing amphiphilic nanoscale particles, which process comprises subjecting at least one hydrolyzable compound which comprises at least one hydrolyzable lipophilic group to a hydrolysis and condensation reaction with a substoichiometric amount of water (and subsequently removing liquid).

LIVAGE is a general and very unspecific review of the sol-gel chemistry of transition metal oxides and fails to teach or suggest, *inter alia*, a hydrolysis and condensation reaction with a substoichiometric amount of water and the production of amphiphilic nanoscale particles.

Regarding Fig. 16 of LIVAGE, it is submitted that the structures shown therein are X-ray structures of (macroscopic) single crystals of some transition metal oxo-alkoxides. One of ordinary skill in the art is aware that for an X-ray crystallographic analysis crystals having a size in the mm range are required. Accordingly, the crystals depicted in Fig. 16 of LIVAGE are necessarily larger by several orders of magnitude than the nanoscale particles recited in the instant claims.

It further is pointed out that the reactions shown on page 289, lines 12-14 of LIVAGE which result in the structures shown in Fig. 16 of LIVAGE are not hydrolysis reactions, let alone hydrolysis reactions with a substoichiometric amount of water, but alcoxolation reactions (page 289, lines 9-11) which do not involve any water.

Applicants point out again that LIVAGE does not teach or suggest the production of amphiphilic nanoscale particles at all. Rather, LIVAGE discloses the production of well defined oxoalkoxides as (macroscopic) single crystals. There are distinct differences between these single crystals and nanoscale particles. The different properties are mainly the result of the very large surface area in relation to the volume of the nanoscale particles, which affords properties which are very different from those of macroscopic particles such as single crystals for X-ray crystallographic purposes.

Further, the amphiphilic particles made by the process of the present invention are dispersible in aqueous and organic media. LIVAGE clearly fails to disclose that the macroscopic crystals disclosed therein have this property. In fact, the crystals of LIVAGE can be expected to be too big to be dispersible in any media because surface groups on such crystals do not usually affect the properties of macroscopic crystals to any appreciable extent.

NASS is unable to cure the deficiencies of LIVAGE set forth above (even if one were to assume, *arguendo*, that NASS teaches a process which is similar to that disclosed by LIVAGE, as alleged by the Examiner), and neither does the Examiner appear to consider NASS relevant in this respect (i.e., other than for the removal of liquid).

Applicants submit that for at least all of the foregoing reasons, the Examiner has failed to establish a *prima facie* case of obviousness of the subject matter of any of the claims submitted herewith over LIVAGE in view of NASS. In view thereof, withdrawal of the instant rejection under 35 U.S.C. § 103(a) is warranted and respectfully requested.

CONCLUSION

In view of the foregoing, it is believed that all of the claims in this application are in condition for allowance, which action is again respectfully requested. If any issues yet remain which can be resolved by a telephone conference, the Examiner is respectfully invited to contact the undersigned at the telephone number below.

Respectfully submitted,
Ertugrul ARPAC et al.

/Heribert F. Muensterer/

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December 30, 2009
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